

Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

1-11. (Cancelled)

12. (Currently Amended) A transceiver, comprising:

a plurality of ports, wherein said plurality of ports includes at least one parallel port and at least one serial port;

a bus connecting said plurality of ports on a common substrate, wherein said bus is configured to connect the at least one parallel port to at least one second parallel port or to said at least one serial port;

a plurality of programmable pads in communications with said plurality of ports, wherein at least one of said programmable pads is configured to operate with a plurality of electrical specifications such that an operating voltage of said at least one programmable pad can be changed according to a specified electrical specification; and

a register for sending instructions to configure at least one of said programmable pads to comply with a specified data protocol and the specified electrical specification;

wherein at least one of said programmable pads is configured to either send or receive said data after having been configured to comply with said data protocol and electrical specification.

13. (Original) The transceiver of claim 12, further comprising:
a timing controller for modulating delay between input and output of at least one of said programmable pads.

14. (Currently Amended) The transceiver of claim 12, further comprising:
a timing register for sending instructions to adjust ~~[[the]]~~ said delay between input and output of at least one of said programmable pads.

15. (Original) The transceiver of claim 12, further comprising:
an input controller for configuring at least one of said programmable pads to receive at least one of a data signal and a control signal.

16. (Original) The transceiver of claim 12, further comprising:
an output controller for configuring at least one of said programmable pads to send at least one of a data signal and a control signal.

17. (Original) The transceiver of claim 12, further comprising:
a testing register for sending a test message to measure leakage current from at least one of said programmable pads.

18. (Currently Amended) A method for programming a transceiver, comprising:
accessing protocol instructions that specify a data protocol;

accessing an electrical specification that includes instructions to change an operating voltage of a programmable pad disposed on ~~[[the]]~~ said transceiver;

sending a first control signal that carries said protocol and electrical specification instructions;

executing said protocol and electrical specification instructions to configure said programmable pad;

sending a second control signal to instruct said programmable ~~pad~~ pad, configurable to function as an output or an input based on said protocol and electrical specification instructions, after executing said protocol and electrical specification instructions; and

sending or receiving data at said programmable pad in accordance with said data protocol and said electrical specification.

19. (Original) The method according to claim 18, further comprising:

sending an input control message to configure said programmable pad to receive at least one of data and a control message.

20. (Original) The method according to claim 18, further comprising:

sending an output control message to configure said programmable pad to send at least one of data and a control message.

21. (Original) The method according to claim 18, further comprising:

sending a test message to measure leakage current at said programmable pad.

22. (Currently Amended) The method according to claim 18, further comprising:

sending a delay control message to adjust ~~[[the]]~~ said delay between input and output at said programmable pad.

23. (Original) The method according to claim 22, further comprising:

delaying data at said programmable pad for a fixed time interval;

sending said data to a destination external to said programmable pad upon expiration of said fixed time interval, wherein said delay control message determines said fixed time interval.

24. (Original) The method according to claim 22, further comprising:

delaying data in a buffer at said programmable pad for a fixed time interval;

sending said data to a second buffer or a destination external to said programmable pad upon expiration of said fixed time interval, wherein said delay control message determines whether said data is sent to said second buffer or said destination.

25. (Currently Amended) A transceiver, comprising:

protocol means for accessing protocol instructions that specify a data protocol and an electrical specification that includes instructions to change ~~[[the]]~~ an operating voltage of a programmable pad disposed on the transceiver; and

control logic for executing said protocol instructions to configure said programmable pad, such that said programmable pad is configured to function as an

output or an input based on said protocol and electrical specification instructions and to
either send or receive data after having been configured to comply with said data
protocol and said electrical specification.

26. (Original) The transceiver of claim 25, further comprising:
input control means for instructing said programmable pad to receive at least one
of data and a control message.

27. (Original) The transceiver of claim 25, further comprising:
output control means for instructing said programmable pad to send at least one
of data and a control message.

28. (Original) The transceiver of claim 25, further comprising:
testing means for measuring leakage current at said programmable pad.

29. (Original) The transceiver of claim 25, further comprising:
timing means for adjusting the delay between input and output at said
programmable pad.

30. (Original) The transceiver of claim 29, further comprising:
means for delaying data at said programmable pad for a fixed time interval; and

means for sending said data to a destination external to said programmable pad upon expiration of said fixed time interval, wherein said timing means determines said fixed time interval.

31. (New) The transceiver of claim 1, wherein said at least one parallel port is configured to operation according to a 10 Gigabit Media Independent Interface (XGMII) protocol.

32. (New) The transceiver of claim 1, wherein said at least one parallel port is configured to operate at 1/10 of a data rate of said at least one serial port.

33. (New) The transceiver of claim 1, wherein said at least one serial port is configured to operate according to a 10 Gigabit Attachment Unit Interface (XAUI) protocol.

34. (New) The transceiver of claim 1, wherein said at least one serial port is configured to operate at a plurality of data rates.

35. (New) The transceiver of claim 34, wherein said plurality of data rates includes 3.125 GHz, 2.5 GHz, or 1.25 GHz.

36. (New) The transceiver of claim 1, wherein said at least one serial port is configured to operate according to a 10 Gigabit Ethernet Extended Sublayer (XGXS) protocol.

37. (New) The transceiver of claim 1, wherein said at least one serial port is configured to perform a parallel to serial conversion when said data is received as parallel data.

38. (New) The transceiver of claim 1, wherein said at least one parallel port is configured to perform a serial to parallel conversion on said data when received as serial data.